

Application S/N 09/928,622

Attorney Docket: BP1520

## IN THE CLAIMS

Please amend the claims as follows, substituting any amended claim(s) for the corresponding pending claim(s):

1        1. (Currently Amended) An energy detect with auto pair select system, comprising:  
2        a device that is operable to perform energy detection with auto pair selection;  
3        a plurality of wire pairs that is communicatively coupled to the device; and  
4        wherein the device generates a qualified energy by considering an energy associated with at least  
5        two wire pairs within the plurality of wire pairs and subtracts a link pulse energy from the energy when  
6        the device transmits a link pulse to generate the qualified energy, the link pulse energy is associated with  
7        the link pulse that is transmitted from the device;

8        the device uses the qualified energy to determine whether at least one additional device is  
9        communicatively coupled to the device via at least one wire pair within the plurality of wire pairs; and  
10       the device performs auto power down when no device is communicatively coupled to the device  
11       via the at least one wire pair; and  
12       an OR gate that sums energies on each of the plurality of wire pairs; and  
13       an AND gate that suppresses the link pulse energy from the sum of the energies of each of the  
14       plurality of wire pairs.

1        2. (Original) The energy detect with auto pair select system of claim 1, wherein the auto  
2        power down comprises a partial auto power down.

1        3. (Currently Amended) The energy detect with auto pair select system of claim 1, wherein  
2        the device performs auto media dependent interface crossover functionality when the at least one wire  
3        pair is transposed with at least one additional wire pair.

1        4. - 5. (Cancelled)

1        6. (Currently Amended) The energy detect with auto pair select system of claim 1, wherein  
2        the device uses the energy of at least one wire pair associated with the at least two wire pairs within the  
3        plurality of wire pairs as the qualified energy when the device does not transmit a link pulse the link  
4        pulse.

1        7. (Original) The energy detect with auto pair select system of claim 1, wherein the plurality  
2        of wire pairs comprises at least one of a receive wire pair and a transmit wire pair.

Application S/N 09/928,622

Attorney Docket: BP1520

1           8.       (Original) The energy detect with auto pair select system of claim 1, further comprising a  
2 state machine that is operable to determine connectivity of the device with the plurality of wire pairs.

1           9.       (Original) The energy detect with auto pair select system of claim 8, wherein the state  
2 machine is operable to change an operational state of the device based on whether at least one additional  
3 device is communicatively coupled to the device via at least one wire pair within the plurality of wire  
4 pairs.

1           10.      (Currently Amended) The energy detect with auto pair select system of claim 1, wherein  
2 the device performs wake up from a standby state when the device determines that the at least one  
3 additional device is communicatively coupled to the device via the ~~wire pair~~ at least one wire pair.

1           11.      (Currently Amended) An energy detect with auto pair select system, comprising:  
2           a device that is operable to perform energy detection with auto pair selection;  
3           a wire pair that is communicatively coupled to the device, wherein the wire pair includes at least  
4           one of a transmit pair and a receive pair, and  
5           wherein the device determines whether the wire pair comprises an energy;  
6           the device subtracts a link pulse energy from the energy when the device transmits a link pulse to  
7           generate a qualified energy, the link pulse energy is associated with a link pulse that is transmitted from  
8           the device;  
9           the device uses the energy as the qualified energy when the device does not transmit a link pulse;  
10          and  
11          the device uses the qualified energy to determine whether at least one additional device is  
12          communicatively coupled to the device via the wire pair;  
13          at least one additional wire pair, which includes at least one of a transmit pair and a receive pair;  
14          and  
15          wherein the device sums energy on the wire pair and energy on the at least one additional wire  
16          pair.

1           12.      (Original) The energy detect with auto pair select system of claim 11, wherein the device  
2 performs auto media dependent interface crossover functionality when the wire pair is transposed with at  
3 least one additional wire pair.

Application S/N 09/928,622

Attorney Docket: BP1520

1           13. (Original) The energy detect with auto pair select system of claim 12, wherein the device  
2 performs the auto media dependent interface after determining whether the at least one additional device  
3 is communicatively coupled to the device via the wire pair.

1           14. (Original) The energy detect with auto pair select system of claim 11, wherein the device  
2 performs auto power down when no device is communicatively coupled to the device via the wire pair.

1           15. (Original) The energy detect with auto pair select system of claim 14, wherein the auto  
2 power down comprises a partial auto power down.

1           16. (Original) The energy detect with auto pair select system of claim 11, wherein the device  
2 performs wake up from a standby state when the device determines that the at least one additional device  
3 is communicatively coupled to the device via the wire pair.

1           17. (Original) The energy detect with auto pair select system of claim 11, wherein the device  
2 comprises a state machine that is operable to change an operational state of the device based on whether  
3 the at least one additional device is communicatively coupled to the device via the wire pair.

1           18 - 19 (Cancel)

1           20. (Currently Amended) An energy detect with auto pair select system, comprising:  
2           a device that is operable to perform energy detection with auto pair selection;  
3           a plurality of wire pairs that is communicatively coupled to the device;  
4           a state machine that is operable to determine connectivity of the device; and  
5           wherein the device performs auto media dependent interface crossover functionality when at least  
6           two wire pairs within the plurality of wire pairs are transposed;  
7           the device determines whether at least one wire pair within the wire pair comprises an energy;  
8           the device subtracts a link pulse energy from the energy, when the device transmits a link pulse,  
9           to generate a qualified energy, the link pulse energy is associated with a link pulse that is transmitted from  
10          the device;  
11          the device uses the energy as the qualified energy when the device does not transmit a link pulse;  
12          the device provides the qualified energy to the state machine;  
13          the state machine determine whether at least one additional device is communicatively coupled to  
14          the device via ~~the wire pair~~ the at least one wire pair; and  
15          the device performs energy savings management.

Application S/N 09/928,622

Attorney Docket: BP1520

1           21. (Original) The energy detect with auto pair select system of claim 20, wherein the state  
2 machine is contained within the device.

1           22. (Original) The energy detect with auto pair select system of claim 20, wherein the device  
2 is operable within at least one of a standby state and an awake state as determined by the state machine.

1           23. (Original) The energy detect with auto pair select system of claim 20, wherein the device  
2 performs auto power down when the device determines that no device is communicatively coupled to the  
3 device via the wire pair.

1           24. (Original) The energy detect with auto pair select system of claim 20, further comprising  
2 an OR gate that sums energies on each of the plurality of wire pairs; and  
3           an AND gate that suppresses the link pulse energy from the sum of the energies of each of the  
4 plurality of wire pairs.

1           25. (Currently Amended) An energy detect with auto pair select method, the method  
2 comprising:  
3           performing energy detection of a plurality of wire pairs, at least one wire pair within the plurality  
4 of wire pairs is communicatively coupled to a device;  
5           generating a qualified energy by considering an energy associated with at least two wire pairs  
6 within the plurality of wire pairs;  
7           determining whether at least one additional device is communicatively coupled to the device via  
8 at least one wire pair within the plurality of wire pairs; and  
9           performing auto power down when no device is communicatively coupled to the device via the  
10 wire pair; and  
11           performing auto media dependent interface crossover functionality when the wire pair is  
12 transposed with at least one additional wire pair.

1           26. (Original) The method of claim 25, further comprising performing auto negotiation  
2 between the device and at least one additional device.

1           27. (Original) The method of claim 25, further comprising waking up the device from a  
2 standby state.

1           28. (Original) The method of claim 25, wherein the auto power down comprises a partial  
2 auto power down.

Application S/N 09/928,622

Attorney Docket: BP1520

29. (Cancelled)

1 30. (Original) The method of claim 25, further comprising summing energies on each of the  
2 plurality of wire pairs; and3 suppressing energy associated with a transmitted link pulse from the sum of the energies of each  
4 of the plurality of wire pairs, the transmitted link pulse being transmitted from a device.1 31. (Original) The method of claim 25, further comprising using the energy of at least one  
2 wire pair within the plurality of wire pairs as the qualified energy when the device does not transmit a link  
3 pulse.1 32. (Original) The method of claim 25, wherein the plurality of wire pairs comprises at least  
2 one of a receive wire pair and a transmit wire pair.1 33. (Original) The method of claim 25, further comprising employing a state machine to  
2 determine connectivity of the device with the plurality of wire pairs.1 34. (Original) The method of claim 33, wherein the state machine is operable to change an  
2 operational state of the device based on whether at least one additional device is communicatively  
3 coupled to the device via at least one wire pair within the plurality of wire pairs.1 35. (Original) The method of claim 25, wherein the device performs wake up from a standby  
2 state when the device determines that the at least one additional device is communicatively coupled to the  
3 device via the wire pair.1 36. (Original) An energy detect with auto pair select method, the method comprising:  
2 performing energy detection with auto pair selection on a device having a wire pair  
3 communicatively coupled thereto;  
4 determining whether the wire pair comprises an energy;  
5 subtracting a link pulse energy from the energy, when the device transmits a link pulse, to  
6 generate a qualified energy, the link pulse energy is associated with a link pulse that is transmitted from  
7 the device;  
8 using the energy as the qualified energy when the device does not transmit a link pulse; and  
9 using the qualified energy to determine whether at least one additional device is communicatively  
10 coupled to the device via the wire pair.

Application S/N 09/928,622

Attorney Docket: BP1520

1           37. (Original) The method of claim 36, further comprising performing auto media dependent  
2 interface crossover functionality when the wire pair is transposed with at least one additional wire pair.

1           38. (Original) The method of claim 37, further comprising performing the auto media  
2 dependent interface after determining whether the at least one additional device is communicatively  
3 coupled to the device via the wire pair.

1           39. (Original) The method of claim 36, further comprising performing auto power down  
2 when no device is communicatively coupled to the device via the wire pair.

1           40. (Original) The method of claim 39, wherein the auto power down comprises a partial  
2 auto power down.

1           41. (Original) The method of claim 36, further comprising waking up the device from a  
2 standby state after determining that the at least one additional device is communicatively coupled to the  
3 device via the wire pair.

1           42. (Original) The method of claim 36, further comprising employing a state machine to  
2 change an operational state of the device based on whether the at least one additional device is  
3 communicatively coupled to the device via the wire pair.

1           43. (Original) The method of claim 36, wherein at least one additional wire pair is  
2 communicatively coupled to the device; and

3           further comprising summing energy on the wire pair and energy on the at least one additional  
4 wire pair.

1           44. (Original) The method of claim 43, wherein the wire pair comprises at least one of a  
2 transmit pair and a receive pair; and  
3           the at least one additional pair comprises at least one of a transmit pair and a receive pair.